



Final Workshop; “Lessons Learnt and Way Forward”, 1 December 2006, Hanoi, Vietnam

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ASEAN Wind 2005

Feasibility Assessment and Capacity Building
for Wind Energy Development
in Cambodia, Philippines and Vietnam

Final Workshop; “Lessons Learnt and Way Forward”

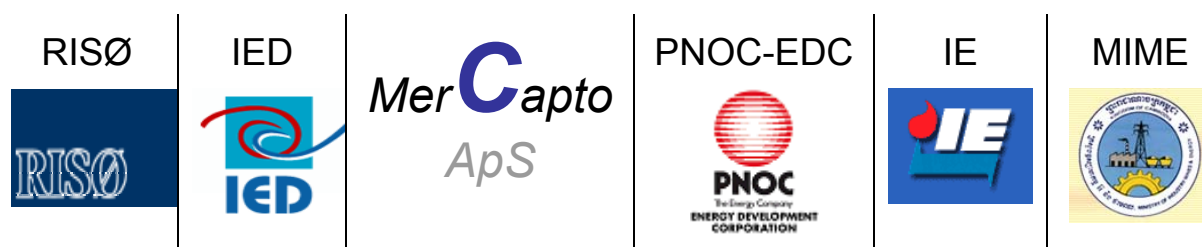
1 December 2006, Hanoi, Vietnam

Sunway hotel, Hanoi

Project reference: EuropeAid/119920/C/SV

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ASEAN Wind 2005 - Fact Sheet

Main project data

Full project title: Feasibility Assessment and Capacity Building for Wind Energy Development in Cambodia, The Philippines and Vietnam

Objective: The main objective of the project is to promote wind energy development and facilitate investments on wind energy projects in The Philippines, Vietnam and Cambodia through feasibility assessment and capacity building.

Start: February 2005

End: December 2006

Total effort: 64.5 man-month

Contracting Authority: EC-ASEAN Energy Facility (www.aseanenergy.org/eaef)

Budget / Support: € 1 000 000 / € 500 000 by European Community

Tasks

Task 1: Wind Resource Assessments	RISO + IED; PNOC-EDC; IE	(10.5 MM)
Task 2: Power System Analyses	RISO + PNOC-EDC; IE	(7.5 MM)
Task 3: Policy & Market Studies	RISO + IED; Mercapto; PNOC-EDC; IE	(9.5 MM)
Task 4: Technical Feasibility Studies	RISO + PNOC-EDC; IE	(10 MM)
Task 5: Economic Feasibility Studies	IED + RISO; PNOC-EDC; IE	(7 MM)
Task 6: CDM Project Studies	Mercapto + All	(5.5 MM)
Task 7: Financial Framework	IED + All	(5.5 MM)
Task 8: Dissemination	RISO + All	(4.5 MM)

Project partners

RISO	RISØ National Laboratory	Denmark	Niels-Erik Clausen	niels-erik.clausen@risoe.dk
IED	Innovation Energie Développement	France	Anjali Shanker	a.shanker@ied-sa.fr
Mercapto	Mercapto Consult	Denmark	Bernt Frydenberg	bernt@frydenberg.dk
PNOC-EDC	PNOC Energy Development Corporation	Philippines	Samuel Hernando	hernando@energy.com.ph
IoE	Institute of Energy	Vietnam	Pham Khanh Toan	toanpk@fpt.vn
MIME	Ministry of Industry, Mines & Energy	Cambodia	Sovanna Toch	mimedet@forum.org.kh

The present report documents the results of the project activity:

‘Final project workshop’, 1 December 2006, Hanoi, Vietnam

covering all project activities, but with emphasis on financing, lessons learnt and dissemination of results.

The report forms one of the deliverables of the project.

The report has been edited by

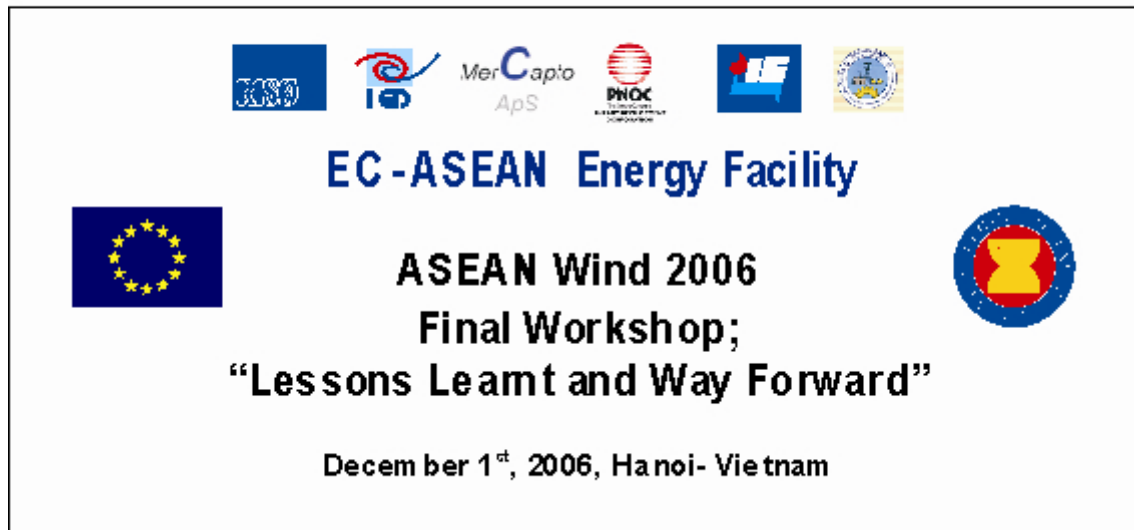
Niels-Erik Clausen

RISØ National Laboratory

January 2007

Workshop banner

Gửi Quốc Anh
Mẫu Banner - KT (3,0m x 1,5m)





Group photo of workshop participants

The workshop

The final Project Workshop was held 1. December 2006 in Hanoi at Sumway hotel.

The **objective** of the workshop was to exchange knowledge and discuss methodologies and findings between the relevant stakeholders on feasibility analyses of wind power in both grid-connected and island wind power applications in Vietnam

The **target groups** for the workshop were energy planners, physical planners, power utilities, project developers, investors and consultants within the area.

On basis of the two case studies selected for the Project, the workshop presented and discussed selected elements in the technical and especially financial feasibility analyses, including financing options for wind power in Vietnam. Two invited private wind project developers gave their view on the institutional framework and financing options available in Vietnam and their opinion on the barriers for development.

The invitation letter, the actual programme, the list of participants and a list of the presentations are presented in the annexes. Included is also an article published in the daily Vietnam News on December 4, 2006.

The programme of the workshop was planned by RISØ in cooperation with IED and the host Institute of Energy, while IE was responsible for all practical arrangements.

Some impressions from the workshop



Annexes

Workshop introduction

(Part of the invitation letter)

In the framework of EC-ASEAN Energy Facility, the consortium of RISOE National Laboratory (Denmark), Innovation Energie Développement (France), Institute of Energy (Vietnam), Philippine National Oil Company (PNOC), MerCapto (Denmark), and MIME (Cambodia) is implementing the project *“Feasibility Assessment and Capacity Building for Wind Energy Development in Cambodia, the Philippines and Vietnam”*.

The main objective of the project is to promote wind energy development and facilitate investments in wind energy projects in Cambodia, the Philippines and Vietnam through feasibility assessment and capacity building with focus on on-grid wind power. Key activities of the project include the development of policy and institutional framework on wind energy, feasibility studies, and economic and financial studies. The desired outputs of the project to promote the development of wind energy correspond to the key strategies of Programme Area no. 5 (Renewable Energy) of the ASEAN Plan of Action for Energy Cooperation (APAEC) 2004-2009.

As the project will be finalised in December 2006, various studies and reports have been produced for Philippines, Vietnam and Cambodia. From results of the studies some lessons have been learned concerning policy and regulatory framework in each country. Common constraints of wind power development in these countries include the following:

- Lack of information on wind energy resources
- Lack of technical know-how on wind energy assessments, measurements and feasibility studies
- Lack of policy and regulatory frameworks supporting wind power development
- Lack of or little private investments on wind energy projects
- Lack of successful business models for wind energy development
- Lack of financing for renewable energy in general.

The final workshop on "Lessons Learnt and Way Forward" follows other workshops already conducted; on WASP in Bangkok (June 2005), Policy and wind project planning in Manila (December 2005) and Hanoi (March 2006), Wind resource and technical feasibility studies in Hanoi (July 2006), and Economic and Financial Analysis Workshops in Philippines (September 2006) and Cambodia (October 2006).

The final workshops are being organised in Philippines and Vietnam for the purpose of discussions among partners and stakeholders on lessons learnt from the project, and as to how these can be applied in the future work. It will also include possibilities of further work to carry on from the point where the current project ends.

Stakeholders, that have a role in the development of renewable energy, particularly in wind energy, will be invited to participate in the workshops. These include:

1. Governments as the policy makers, who are also involved in the development planning and financial & economic policy support for wind energy development
2. Project developers and other entities active in the sector
3. Utilities and grid operators
4. Financing institutions; national, bilateral and multilateral
5. Designated National Authorities for the CDM projects
6. Other identified stakeholders.

Workshop programme

Venue: SUNWAY Hotel, 19 Pham Dinh Ho Street, Hai Ba Trung District, Hanoi.

Tel: (+84-4) 9.713.888

December 1st 2006; Final Workshop – Lessons Learnt and Way Forward

8:30	Registration		
	Opening session		IE
9:00	Introduction	Mr. Tran Thanh Lien	IE
9:10	Welcome to the Workshop	EC Representative	EC Vietnam
9:15	Welcome to the Workshop	Mr. Ta Van Huong	General Director, Energy and Petroleum Dept. MoI, Vietnam
9:20	Group Photo session		
9:30	Coffee break		
10:00	Session 1 : Lessons learnt	Co- Chairs: Mr. Pham Khanh Toan Mr. Niels-Erik Clausen	Director of IE Project Manager, RISOE
10:20	Introduction to : <ul style="list-style-type: none"> Objectives of the WS and the of the project Activities Status and achievements 	Niels-Erik Clausen	Risoe
10:40	Policy status for Renewable Energy in Vietnam, update in light of latest development	Mr. Ta Van Huong	General Director, Energy and Petroleum Dept. MoI, Vietnam
11:00	Least cost development plan for Vietnam	Mr. Nguyen Anh Tuan	IE
11:20	Potential for large-scale deployment of wind in Vietnam with focus on south of Vietnam – current status	Mr. Nguyen Tien Long	IE - REVN
11:25	Lessons learnt from the project and plans for the future	Mr. Tran Thanh Lien	IE
11:45	Discussion		
12:00	Lunch		

13:00	Session 2: Financing of Renewable Energy especially wind	Co-Chairs: Mr. Tran Thanh Lien Mr. Tuan Nguyen	IE IED
13:00	Financing options for Renewable energy projects.	Mr. Tuan Nguyen	IED
13:20	Case study for the wind projects Phuoc Minh and Ly Son island in Vietnam	Mr. Emmanuel	IED
13:40	The CDM Project Idea Notes (PINs) for Vietnam	Bernt Frydenberg	Mercapto
14:00	Wind energy projects seen from an investors perspective	Mr. Bui Quang Ngan	Vietnam Wind Power JVC.
14:20	Renewable energy projects seen from private developers	Mr. Vu Dinh Tuan	Thien Nang Company
14:40	<i>Discussion</i>		
15:00	<i>Coffee break</i>		
15:15	Session 3 : Way forward	Co-Chairs: Mr. Niels-Erik Clausen Bernt Frydenberg	Risoe Mercapto
15:15	Introduction to Best practice guidelines for project development and lessons learnt	Niels-Erik Clausen Tuan Nguyen Anh	Risoe IED
15:35	Views from financing community and investors on financing renewable with special reference to wind	Mrs. Nguyen Thi Phuong Lan	Agri Bank
15:55	Views from financing community and investors on financing renewable with special reference to wind	Mr. Nam	Vietnam Development Investment Bank
16:15	<i>Panel discussion on way forward</i>		
17:00	<i>Closing</i>	Mr. Tran Thanh Lien	IE

List of participants

No.	Name	Position	Agency
1	Mr. Nguyen Van Ban	Deputy Director	Phong Dien Joint Stock Company
2	Mr. Ngo Van Tuan	Director	Duc Minh Company
3	Ms. Pham Hong Van	Expert	Institute of Energy
4	Mr. Nguyen Thanh Nam	Expert	Vietnam Development Bank
5	Mr. Nguyen Nhat Le	General Director Assistant	Vietnam Renewable Energy Joint Stock Company
6	Mr. Le Van Khanh	Expert of Planning Dept.	Institute of Energy
7	Mr. Vu Toan Thang	Expert of Electric Power System Development Dept.	Institute of Energy
8	Mr. Nguyen Van Thong	Expert of International Cooperation Dept.	Institute of Energy
9	Mr. Bui Quang Ngan	General Director	Vietnam Wind-Power Joint Stock Company
10	Mr. Duong Manh Thao	Chairman	Vietnam Wind-Power Joint Stock Company
11	Mr. Vu Van Thang	Expert	Vietnam Wind-Power Joint Stock Company
12	Mr. Nguyen Van An	Expert of Wind, Solar Energy Dept.	Institute of Energy
13	Mr. Ta Van Huong	Director of Energy & Petroleum Dept.	Institute of Energy
14	Mr. Pham Sy Quoc Hung	Expert	PECC3
15	Mr. Pham Nguyen Minh	Expert	PECC3
16	Mr. Vu Dinh Tuan	Director	Thien Nang Company
17	Mr. Nguyen Tien Long	Manager of Wind, Solar Energy	Institute of Energy
18	Mr. Nguyen Duc Cuong	Manager of Rural Energy, New Technology & DSM Dept.	Institute of Energy
19	Mr. Nguyen Quang Dai	Expert	MOI

No.	Name	Position	Agency
20	Ms. Le Thi Ngan	Expert	Thien Nang Company
21	Mr. Tran Hong Nguyen	Expert of Energy & Petroleum Dept.	MOI
22	Mr. Tran Thanh Lien	Manager of International Cooperation Dept.	Institute of Energy
23	Mr. Pham Khanh Toan	Director	Institute of Energy
24	Mr. Emanuel Huard	Engineer	IED
25	Mr. Bernt Frydenberg	CEO	Mercapto Consult
26	Mr. Praing Caulasa	Deputy Director Planning	Electriate' du Cambodia
27	Niels Eric Clausen	Senior Consultant	RISO National Lab
28	Tuan Nguyen	Consultant	IED
29	Ms. Nguyen Thanh Ha	Journalist	Vietnam News
30	Ms. Tran Hai Anh	Expert of Energy & Petroleum Dept.	MOI
31	Ms. Le Thi Phuong Lan	Manager	AgriBank
32	Ms. Pham Minh Hoa	Expert of International Cooperation Dept.	Institute of Energy
33	Mr. Nguyen Anh Tuan	Manager of Electric Power System Development Dept.	Institute of Energy
34	Ms. Tiet Minh Tuyet	Expert of Energy Demand Forecast & DSM Dept.	Institute of Energy
35	Mr. Nguyen Huy Thieu	Expert	Institute of Energy
36	Mr. Lai Quang Huy	Expert	Institute of Energy

Article published in the daily Vietnam News on December 4 2006

European Commission funded wind projects discussed in VN

Hanoi-- Local and foreign energy experts yesterday held a workshop on an EC-ASEAN feasibility assessment for wind energy development in Vietnam, the Philippines and Cambodia.

The focus of the project is to promote wind energy development and facilitate investment in wind energy projects in the three countries, chief project manager Niels-Erik Clausen told the workshop in Hanoi.

Tasks outlined for further study in the assessment included wind resource assessment, power system analysis, grid connection capabilities, policy, institutional and market research, technical feasibility study, economic and financial study, financial and contractual frameworks, information dissemination and project co-ordination and management.

Clausen said making available the necessary wind resource data for feasibility studies is needed while on-going wind measurements statistics will continue in the region.

" Part of the region is in a high risk zone due to tropical cyclones which is a potential barrier for wind energy development," he said.

Speaking on policy, Clausen said there is a need to have appropriate policies for wind energy in place in Vietnam to create a legal framework for donors to carry out wind energy projects in the country.

Ta Van Huong, director of the Ministry of Industry's Energy and Petroleum Department, said the assessment will be finalised within the month and various studies and reports have been compiled for the three countries.

From results of the studies some lessons have been learned concerning policy and regulatory framework in each country, Huong said, adding however, that common constraints of wind power development in these countries still exist.

" There is still a lack of private investment on wind energy projects, successful business models for wind energy development and financing for renewable energy in general," Huong told the workshop.

The two-year project, which will be wrapped up this month, has been funded by RISØ National Laboratory and Mønstedsø in Denmark, Innovation Energy Development in France, Institute of Energy in Vietnam, Philippine National Oil Company, and Cambodia's Ministry of Mines and Energy.-- VNS.

Thanh Ha, Vietnam News, Hanoi, Vietnam.

Presentations (available on request)

1. Niels-Erik Clausen; Risø National Laboratory: Introduction to the ASEAN Wind project 2005-06
2. Mr. Ta Van Huong, Energy and Petroleum Dept. Ministry of Industry: Policy status for renewable energy in Vietnam
3. Nguyen Anh Tuan, Institute of Energy, Least cost power development plan for Vietnam
4. Mr. Nguyen Tien Long: Potential for large-scale deployment of wind power in Vietnam
5. Mr. Tran Thanh Lien: Lessons Learnt from On Going Projects and Plans for the Future
6. Tuan Nguen & Emmanuel Huard, IED: Financial options for wind-power development and case studies in Vietnam
7. Emmanuel Huard, IED: Economic & financial case studies: Phuoc Minh grid connected system and Lyson island hybrid wind/diesel system
8. Bernt Frydenberg Mercapto Consult: Value of CER's for the Phuoc Minh and Ly Son Projects
9. Niels-Erik Clausen Risø National Laboratory: Introduction to Best practice guidelines for project development and lessons learnt
10. Tuan Nguyen, IED: Lessons learnt and way forward; Institutional and financial points for discussion
11. Ms. Nguyen Thi Phuong Lan, AGRI Bank: Views from commercial bankers in investing in wind energy in Vietnam